PUBLIC HEALTH DEPARTMENT,
GUILDHALL, CAMBRIDGE.

February 24th, 1925.

To the Chairman and Members of the School Hygiene Committee.

MR CHAIRMAN, LADIES AND GENTLEMEN,

I beg to present to you my Annual Report for 1924, upon the health of the Elementary School Children in Cambridge.

The Statistical tables appended are now in accordance with the directions contained in the Board of Education's Circular 1321.

The more notable features of this year's work are:

The continued use made of the Clinic as a centre for the treatment of minor ailments.

The high proportion of children (both routine and special cases) obtaining prompt treatment for defects found.

The elimination of Ringworm as a serious cause of loss of attendance.

As in previous years, I have to acknowledge the help given by Dr Gurney in supplying practically the whole of the statistics relating to the school inspections, as well as much of the accompanying text.

I am,

Your obedient Servant,

ANDREW J. LAIRD,
School Medical Officer.

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Report of the School Medical Officer.

FOR THE YEAR 1924.

Population of the Borough	59120
Area of the Borough	5457 acres
Number of Elementary Schools	23
Number of Departments	43
Average number of Children on the Registers ...	7241
Average Attendance	6509

Staff.—There have been no changes in the staff during the year. The officers in the service of the Education Committee are :

School Medical Officer ...	Andw. J. LAIRD, M.D., D.P.H.
Assistant School Medical Officer	A. Mabel GURNEY, M.B., D.P.H.
Public Dental Officer ...	W. Baird GRANDISON, L.D.S., R.C.S.
Assistant Public Dental Officer ...	Miss E. O. BETTS, L.D.S. (Eng.)
Bacteriologist	W. H. HARVEY, M.D.
Dental Attendants	Miss M. A. BENNETT. Miss S. HALL.
School Nurses	Miss M. M. W. STEVENS. Miss F. A. NICHOLLS.
Clerk	Miss G. M. WALLIS.

together with the part time services of the Chief Clerk in the Public Health Department.

School Premises.—No new premises have been erected during the year, the buildings for the Brunswick Council School and for physically and mentally defective children being still on paper only. Owing to the re-grouping of scholars, St Peter's Boys' School has been closed, the boys and girls being now accommodated in what was formerly the Girls' School.

The routine medical inspections are carried out on the school premises with the following exceptions, viz :—

St Paul's Boys', Girls' and Infants' School ; children were inspected in the St Paul's Institute.

St Barnabas' Girls' were inspected in the Church Institute.

Abbey Mixed ; the children were inspected in the Parish Room.

St Andrew's Boys' were also inspected in the Parish Room.

Brunswick School ; boys and girls were inspected at the Clinic owing to want of accommodation in the temporary premises.

In all these the rooms used are close to the schools.

Groups of Children Inspected.—The children inspected were those usually classified as Entrants, *i.e.*, children entering school for the first time, the eight-year old children (intermediates), the twelve and thirteen year old children (leavers), and any other children presented for some special reason ("specials").

The number seen belonging to the first three age groups (routine cases) and the number specially examined were :—

Routine Cases :	Boys.	Girls.	Total.
Entrants ..	388	353	741
Intermediates ...	340	358	698
Leavers ...	408	379	787
	1136	1090	2226

Special Inspections, 1315 ; re-inspections, 1447.

The following figures show the numbers examined in each group since 1919. The number of entrants follows closely the fluctuations in the birth rate. Next year a rise in the numbers may be expected and then again a decline.

	1919 (from May)	1920	1921	1922	1923	1924
Entrants ...	671	1308	701	561	677	741
Intermediates ...	183	664	643	666	840	698
Leavers ...	392	1453	835	799	961	787
Total	1246	3425	2179	2026	2478	2226

The number of routine inspections represents 34 per cent of the number of children in average attendance. The proportion of routine inspections in 1922 was 29 per cent, and in 1923 37 per cent of the average attendance.

Co-operation of Parents.—The proportion of parents who were present at the inspection of their children in school rose from 50.7 per cent. in 1923 to 61.2 per cent. in 1924. This is due partly no doubt to the increased proportion of the children in the "entrant" or five year old group, and also Dr Gurney believes partly to the fact that many parents are now known to her personally, having already inspected other children from the same families. The visit of the parents is made the occasion of informal talks upon the health of the children generally, and is undoubtedly of great value. The greater interest in health matters, including the health of school children, is also favourably influenced by the work of the Infant Welfare Centres, and by the talks to parents given by medical officers and dentists.

Inspection Clinic.—The Clinic is open every week-day including Saturdays, from 9.30 a.m. until 1 p.m. The Assistant Medical Officer, two School Nurses and a Clerk are in attendance.

The total number of children seen in 1924 was 1791, being 732 less than in 1923. The attendances in 1924 numbered 12,392, a decrease of 1727 as compared with 1923. It is rather suggestive that the decline in the numbers followed the announcement in the newspapers that there was a proposal on foot to make a charge for treatment.

The following are the figures for each quarter of the year :—

	Children.	Attendances.
1st Quarter	576	4283
2nd Quarter	468	3458
3rd Quarter	238	1906
4th Quarter	509	2745
	1,791	12,392

The numbers treated in previous years were :—

1916	1917	1918	1919	1920	1921	1922	1923
330	457	449	908	1596	1917	1872	2523

The average daily attendance during 1924 was 51.

Eye Clinic.—The number of children who attended for refraction was 90, 13 less than in 1923. The conditions found were :—Astigmatic hypermetropia 58, astigmatic myopia 15, simple myopia 11, simple hypermetropia 5 and one other.

The numbers have been smaller during the past two years owing to arrears left from war years being made up and to the decrease in the number of "intermediates" and "leavers." All the 1923 cases who had not received their spectacles by the end of that year received their spectacles during 1924, with the exception of one or two who left the town.

58 of these children were found at routine inspections in school.

Review of the facts disclosed by inspection.

The notes which follow under this heading are perhaps in themselves not very illuminating, but they acquire interest when the position with regard to the facts disclosed in the early years of school medical inspection are borne in mind. A few of the most important of these, taken from previous Annual Reports, will serve to illustrate this.

General Physique and Nutrition.—If the figures are to be taken as a guide, considerable improvement has taken place, and the post-war school child is, on the whole, of better physique than the pre-war child. In 1908, 17 per cent., and in 1913, 15 per cent. of the children were of poor physique, whereas in 1924 only 2½ per cent. were noted to be of poor physique The proportions above the average are practically the same.

Cleanliness.—Without claiming too much, I think it is beyond all doubt that it is in respect of cleanliness that one of the greatest improvements has taken place. With a standard not so high as at present, fully half the children had nits or vermin in their hair when medical work in the schools began. The proportion of dirty children now is much lower even with the higher standard of cleanliness required. The chronic offenders are still there, but they are so frequently inspected and made to clean up that the contamination of the really clean children is much less frequent.

Ringworm.—This is now a comparatively unimportant matter, only some two dozen cases or so per annum, instead of a total of usually a hundred under supervision. The year 1924 ended with only one case on the nurses' lists. The new cases discovered each year from 1912 were as follows :—

1912	13	14	15	16	17	18	19	20	21	22	23	24
70	41	129	80	84	38	33	58	44	39	37	24	26

Other Changes.—Changes in the way of reductions have taken place in :—

		1911	1924
External eye diseases	(%)	8.3	3.2
Enlarged tonsils and adenoids ...		13.0	9.4
Ear disease...		3.7	0.6
Deafness		5.6	3.1
Skin disease		3.1	0.3

while the following show little change, or even an increase :—

	1911	1924
Heart disease	3.8	5.4
Anaemia	4.0	4.5
Enlarged cervical glands	50	44

Height, Weight and General Physique.—The following tables show the average height and weight of children seen at routine inspection for three ages, together with the record for previous years at the same ages.

BOYS.

Age in Years	No. Examined in 1924	Average Height in Inches.				Average Weight in Pounds.			
		1914	1922	1923	1924	1914	1922	1923	1924
5	124	40·69	41·21	41·03	41·51	38·66	39·47	38·71	39·48
8	340	47·30	47·38	47·88	48·55	51·63	56·44	53·80	55·31
12	358	54·68	54·78	52·20	55·35	72·34	73·47	71·39	75·37

GIRLS.

Age in Years	No. Examined in 1924	Average Height in Inches.				Average Weight in Pounds.			
		1914	1922	1923	1924	1914	1922	1923	1924
5	121	40·76	40·87	40·73	41·44	37·99	38·45	38·07	39·83
8	358	47·14	47·31	47·34	47·51	50·23	50·97	50·01	50·92
12	336	55·98	55·91	53·27	55·98	76·81	77·41	74·16	76·84

The proportion of children above and below the average physique was as follows :

	1914	1922	1923	1924
Above Average. %	15	9·4	8·7	14·6
Below Average. %	17	7·7	4·3	2·5

From these figures it would appear that the physique of Cambridge school children has been undergoing steady improvement, in so far as the average is distinctly higher and the proportion below average physique very much less than in the earlier years of this work. This is what the figures undoubtedly tell us, but it is admitted that figures have an evil reputation as an argument. I, however, feel justified in directing special attention to them, as they are supported by what I regard as the very much stronger evidence of the personal testimony of Dr Gurney. Dr Gurney has had the school children of Cambridge under her personal observation continuously since 1911, and has from time to time commented upon the improvement in their cleanliness and general physique.

Clothing and Footgear.—Only 19 children were found at routine inspection with bad clothing, and 54 with bad footwear. The corresponding figures for 1923 were 21 and 14. The figures confirm Dr Gurney's general impression that the children were worse shod, and she refers to the flourishing boot club which has been in existence at St Luke's Boys' School for some years as an example which should be recommended to other schools.

Both Dr Gurney and the School Nurses are of opinion that there is a slow but steady improvement in general tidiness ; fewer children are seen with clothing pinned on.

Cleanliness.—The visits of the School Nurses continue to form a most important feature of the work, and has been carried on as regularly as other important duties, such as enquiries in connection with infectious diseases, permitted.

The number of children seen was 4,360. In 1923 it was 4,519.

The proportion found perfectly clean was 74·6 per cent. In 1923 it was 72·6 per cent.

There was a reduction in the amount of actual lousiness, only 3·5 per cent having live pediculi present, compared with 5·9 per cent in 1923. The very "nitty" children formed 3·5 per cent of the whole as against 6·9 per cent in 1923, and the slightly "nitty" 16·6 per cent as against 14·6 per cent in 1923.

Proceedings in Court were taken by the School Attendance Officer in 31 cases, and fines of from 2/6 to 20/- were inflicted in 12 cases.

Ringworm.—The very satisfactory position recorded in previous Annual Reports has been maintained in 1924. Only 26 new cases occurred, of which 16 were scalp cases. Twelve of these had X-ray treatment at Addenbrooke's Hospital. Four were treated at the School Clinic, and ten privately. There was only one case in existence at the end of the year.

External Eye Disease.—The conditions found were : Conjunctivitis 14, blepharitis 15, squint 33, and various other conditions 11, making a total of 73. The total number of similar conditions in 1922 was 75, and in 1923, 68.

Defective Vision.—The number of children found at routine inspection to have defective eyesight (i.e., 6/12 or worse) was 177, or 11·10 per cent.

This number includes 90 children who were already wearing spectacles, and 40 for whom no treatment was necessary.

Enlargement of the Thyroid Gland (*Goitre*).—The number of instances in which enlargement of the thyroid gland was found among school children of twelve years of age was as follows for the years 1922-24 :—

Among 1,329 boys no cases at all, and
among girls in 1922, 4 cases out of 393 examined = 1·0 per cent.
1923, 4 ,, ,, 446 ,, = 0·8 ,, ,,
1924, 4 ,, ,, 379 ,, = 1·0 ,, ,,

The enlargement recorded was only sufficient to be noticed on casual inspection, without any measurement or palpation.

Tonsils and Adenoids.—211 children (9·4 per cent.) had enlarged tonsils, and 208 (9·3 per cent.) had slightly enlarged tonsils. 49 also suffered from adenoids.

Ear Disease and Deafness.—The number of children found with defective hearing was 70 or 3·1 per cent. of those inspected. 14 had a purulent ear discharge (0·6 per cent.).

The figures for several years are given for comparison :—

	1911	1912	1913	1914	1922	1923	1924
Otorrhea	3·7	1·8	1·2	1·3	1·0	0·4	0·6
Deafness	5·6	3·7	3·4	7·6	2·3	1·6	3·1

Diseases of the Lungs.—Six children presented definite signs of Tuberculosis of the lungs. In addition, a number of children with doubtful indications of pulmonary disease were referred to the Tuberculosis Officer for further examination.

Diseases of the Heart.—122 children presented symptoms of cardiac disease, of which 15 were considered to be organic and the remainder functional.

Defects of Speech were found in only 2 children.

Other Defects.—Included in this group are 101 children with anaemia, 28 with symptoms of nervous disease, 21 with deformities, and 64 with a variety of minor defects.

Deformities—The first step in dealing with this question is obviously as accurate information as possible of the number of deformed and crippled children.

A careful investigation has been made in all the schools, and a note made of all crippling defects and of any deformities with the following results :

A. *Crippled Children.*	Boys.	Girls.	Total.
Infantile Paralysis	4	11	15
Tubercular Joint Disease ...	3	2	5
Heart Disease	4	3	7
Missing Limbs (from birth) ..	–	2	2
	11	18	29

B. *Deformities* (Not Crippling).	Boys.	Girls.	Total.
Scoliosis (Spinal Curvature) ...	16	12	28
Pigeon Chest	8	–	8
Bow Legs	1	1	2
Shoemaker's Chest	5	2	7
Flat Foot	1	2	3
Club Foot	2	1	3
Others	1	3	4
	34	21	55

This gives a proportion of 4.4 crippled children per 1000 in attendance at the elementary schools, and 8.4 per 1000 with deformities.

Vaccination.—The proportion of children found with vaccination marks in 1924 was 31.4 per cent. This would appear now to be about the usual proportion.

Infectious Diseases.

With the exception of chicken pox the year 1924 has been another year of comparative freedom from any serious outbreak of infectious disease in the schools. There was, however, towards the close of the year, a considerable increase in the notifications of measles. The notifications received from Head Teachers and School Attendance Officers are as follows :

	1918	1919	1920	1921	1922	1923	1924
Influenza ...	296	113	33	13	1	4	3
Measles... ...	225	463	538	53	258	322	473
German Measles	16	5	1	26	1	1	8
Whooping Cough	614	38	75	142	297	42	15
Chicken Pox ...	108	175	181	122	55	54	260
Mumps...	13	37	88	1593	14	4	91
Ringworm ...	32	41	39	23	10	4	15
Scabies	3	4	1	4	2	—	—
Skin Diseases ..	10	29	43	19	10	2	1
Others	488	463	278	172	77	64	122
Totals	1805	1427	1436	2173	725	497	588

The total number or school children notified by Doctors to be suffering from Scarlet Fever was 64 out of a total of 96 cases at all ages. Milton Road Mixed School contributed 19, and St Giles' Infants' 11 cases.

Of a total of 51 cases of Diphtheria notified by Doctors in 1924, 28 were elementary school children. Associated with the cases 13 Diphtheria "Carriers" were found in the schools.

The total number of "swabbings" in the schools was 692.

School Closure.—Only one school was closed on account of infectious diseases, viz., Newnham Croft, from March 7th to 24th on account of Measles and Chicken Pox.

The question of school closure under Article 45 (b) of the Education Act has been dealt with in Circular 1337 issued by the Board of Education on the 29th July, 1924. In future "the Board will not regard the prevalence of an epidemic of infectious disease as a reasonable ground for closure save in exceptional circumstances, when the School Medical Officer advises or approves such closure on purely medical grounds." Attendances of less than 60 per cent. the result of infectious disease will not be reckoned in calculating the average attendance for the purpose of grant, provided the Medical Officer can testify to that effect. To this there is a special exception made in cases where the attendance has been abnormally low compared with the average of the area. The new Regulation is in accordance with prevailing medical opinion, and the temptation to close schools upon grounds not strictly and solely medical is as far as possible removed.

TREATMENT OF DEFECTS.

1. *At Addenbrooke's Hospital.*—The X-ray treatment of ringworm of the scalp, the removal of tonsils and adenoids, the treatment of otorrhea, and of a variety of other conditions, *e.g.* curvature of the spine, chorea, disease of the eyes, etc., are all undertaken for the Education Committee at the Hospital. The Committee make an annual subscription to the Hospital of 50 guineas, and receive two hundred letters of recommendation for the use of school children.

In 1924, the number of letters of recommendation given for hospital treatment was 179, being 46 less than 1923.

The conditions for which treatment was required were (the figures for 1923 being in brackets) :—disease of the ears 27 (31), eyes 23 (27), ringworm 11 (7), tonsils and adenoids 36 (39), skin disease 18 (25), minor injuries 17 (25), anaemia 1 (15), chorea 2 (1), and various other conditions 52 (55), making a total of 187 defects in 179 children. Of these 151 had received treatment by the end of the year.

2. *Treatment at the School Clinic.*—There has been a fall in the number of children requiring treatment at the clinic, from 653 in 1923, to 471 in 1924. The number of attendances for treatment is also less, having dropped from 5699 in 1923, to 4316 in 1924.

The number of children who attended the clinic for detailed examination of their eyesight was 90, the number in 1923 being 103, and in 1922, 154. By the end of the year spectacles had been obtained by all but 18 children.

3. In addition to the treatment provided by the Hygiene Committee mentioned above, 39 children were treated privately by their own doctors,

Of the 142 children found at routine inspections in school to require treatment, 136 or 95·7 per cent. had obtained treatment by the end of the year. The proportions in former years were 91·6 per cent. in 1923, 90 per cent. in 1922, and 93·4 per cent. in 1921.

Of the 151 "special" cases seen at the clinic and recommended for treatment, 146 or 96·6 per cent. had obtained treatment by the end of the year.

WORK OF THE SCHOOL NURSES.

As a rule the whole forenoon is taken up by work at the clinic; only occasionally have the nurses time for home visiting in the forenoon. The afternoons of the two nurses are taken up alternately in assisting at the routine medical inspections, and in paying visits to homes or to schools. The home visits are concerned with the "following-up" of defects found during routine inspections, and enquiring into the illnesses of children reported to be absent on medical grounds, while their afternoon visits to schools are concerned chiefly with inspections for cleanliness. These latter inspections are frequently interrupted during outbreaks of infectious diseases, but as far as possible an endeavour is made to inspect the children for cleanliness twice each term.

The total number of visits made to schools in the year was 583, of which 152 were in connection with the routine medical inspections, 252 for the cleanliness survey, 23 in connection with infectious diseases, and the remainder for various other purposes.

The "home" visits numbered 1265 in the year, 567 for the purpose of following-up cases of defects found at routine inspections, 545 in connection with infectious diseases, and 153 visits of enquiry as to the cause of absence of children notified as ill by Head Teachers and School Attendance Officers.

The figures for 1923 were :—total home visits 1139, (following-up 655, infectious diseases 373, absentees 111).

DELICATE AND PHYSICALLY DEFECTIVE CHILDREN.

Open-Air School.—The number on the register of the temporary open-air school in Vinery Road at the beginning of the year was 38. During the year 18 children left and 19 were admitted, the figures for 1923 being 20 left and 27 admitted. Of the 18 children who left the school during the year, fourteen were in a fit condition, nine to return to their ordinary schools, and five, who had reached the age of 14 years, to leave school altogether, one was sent to a sanatorium, one was found to be too ill to attend any school, one left the town, and one died.

Supervision by the Tuberculosis Officer.—The total number of reports upon children received from the Tuberculosis Officer during the year was 300. The recommendations contained in these reports included 156 exclusions from attendance at school, 34 for attendance at the open-air school, 98 for return to or for continued attendance at an ordinary school, and 60 for malt and oil to be given.

It should be noted here that the Tuberculosis Officer reported at the end of 1924 that he had under his observation 168 children who were, in his opinion, unfit for the ordinary school. Included in this number were :

1. Children who were attending ordinary schools because of their unsatisfactory home conditions, and for whom there is no other accommodation.
2. Children awaiting Sanatorium treatment.
3. Children on the waiting list of the open-air school.
4. Children who have had Sanatorium treatment, and for whom continued supervision in suitable open-air surroundings is desirable.

From what has been said it will be readily understood why there is always a list of children awaiting (sometimes for very long periods) admission to our small Open-Air School. Our present accommodation is quite insufficient for our needs; more and better accommodation is much needed. Its provision will not only save many delicate children from developing Tuberculosis, and from subsequent prolonged and expensive sanatorium treatment, but will also definitely confirm cures which have been begun in sanatorium.

Voluntary Agencies.—Every year a number of delicate children are sent for a change of air to the seaside by the members of the Invalid Children's Aid Association. Forty were sent away during 1924, and all had been examined and passed as suitable by the Assistant School Medical Officer.

Other voluntary associations which carry on work among school children, and which give most valuable help, include the Care Committee, the Central Aid Society and the Voluntary Association for Mental Welfare. The work which they do has been mentioned in previous Annual Reports, to which reference may be made.

The services of the Inspector of the National Society for the Prevention of Cruelty to Children have been asked for and given in the case of seven children during 1924. All of these were in connection with the failure to obtain medical advice or treatment for defects discovered during the course of inspection. This valuable help has for several years been given by this Society free of cost, and the Council has now agreed to pay a fee to the Society of 5/- for each case visited and dealt with by the Inspector.

Provision of Meals.—The number of children who have attended for dinners at the centre in the old Eden Street Schools during 1924 was 77.

In addition 147 children have been receiving, on the recommendation either of Dr. Gurney or the Tuberculosis Officer, cod-liver oil and malt at school.

A very large number of children also receive either malt and oil or milk at school by request of their parents. The total receiving malt and oil during 1924 was 1320, for which 1,118 paid; and the total having milk at school was 84, for which 70 paid.

All these children are seen by Dr. Gurney at the Clinic once month, their condition noted and weights recorded.

Hope Class for Backward Children.—The number of children in this class at the beginning of 1924 was 40. Sixteen left and nine were admitted, leaving 33 children in attendance at the end of 1924. Of the 16 who left, eight had reached the age of 14, one child was sent to an institution for the feeble-minded, five returned to ordinary school, one left the town, and one was excluded for tuberculosis, and has now gone to a Sanatorium.

Institutional Care.—The number of defective children maintained in Institutions by the Education Committee during 1924 was, four blind, nine deaf and dumb, and ten mentally defective children.

One child (an imbecile girl) was notified to the Local Control Authority.

EMPLOYMENT OF SCHOOL CHILDREN.

Bye-laws for regulating the employment of children and young persons under the Employment of Children Act, 1903, and the Education Act, 1918, came into operation in June, 1922. Under these, all children between 12 and 14 about to be employed must first undergo an examination by the School Medical Officer as to their fitness for employment and a certificate signed by the School Medical Officer must have been obtained by the employer within 14 days of beginning employment.

The number examined and certified during 1924 was 64, all, with one exception, boys.

Street trading by young persons between 14 and 16 is also regulated by the same Bye-laws. Girls under 16 and boys under 15 are prohibited from trading in the street, and trading by boys between 15 and 16 is subject to a license being obtained from the Local Education Authority. The only grounds upon which a license can be refused are :—

- (*a*) That the applicant is by reason of physical or mental deficiency unfit to trade in the streets.
- (*b*) That the applicant has not his parent's or guardian's consent to his being so employed.
- (*c*) That his license has been previously revoked.
- (*d*) That he is not regularly attending a continuation class, as and when required by law.

There were no applications for medical certificates for street trading during the year 1924.

TABLE I.—Return of Medical Inspections.

A. ROUTINE MEDICAL INSPECTIONS.

Number of Code Group Inspections.	
Entrants	741
Intermediates	698
Leavers	787
Total ...	2226
Number of other Routine Inspections	Nil.

B. OTHER INSPECTIONS.

Number of Special Inspections	1315
Number of Re-Inspections	1447
Total ...	2762

TABLE II.—A. Return of Defects found by Medical Inspection in the year ended 31st December, 1924.

Defect or Disease.		Routine Inspections. No. of Defects. Requiring treatment.	Routine Inspections. No. of Defects. Requiring to be kept under observation but not requiring treatment.	Special Inspections. No. of Defects. Requiring treatment.	Special Inspections. No. of Defects. Requiring to be kept under observation but not requiring treatment.
Malnutrition ...		—	11	—	2
Uncleanliness (see Table IV., Group V.) :					
Skin	Ringworm :				
	Scalp ...	—	—	16	—
	Body ...	—	—	10	—
	Scabies ...	—	—	3	—
	Impetigo ...	—	—	32	—
	Other Diseases (non-tuberculous)	—	—	134	—
Eye	Blepharitis ...	5	—	15	—
	Conjunctivitis ...	7	1	82	—
	Keratitis ...	—	—	—	—
	Corneal Opacities ...	—	—	—	—
	Defective Vision (excluding squint)	35	22	18	6
	Squint ...	4	—	6	—
	Other conditions ...	10	2	5	—
Ear	Defective Hearing ...	20	29	7	2
	Otitis Media ...	7	—	15	—
	Other Ear Diseases ...	—	1	4	—
Nose and Throat	Enlarged Tonsils only ...	11	160	13	1
	Adenoids only ...	2	18	4	3
	Enlarged Tonsils and Adenoids	6	9	5	3
	Other Conditions ...	—	11	10	—
Enlarged Cervical Glands (Non-Tuberculous)		—	4	7	—
	Defective Speech ...	—	—	—	—
Teeth.	Dental Diseases (see Table IV. Group IV.)...				
Heart and Circulation	Heart Disease :				
	Organic ...	—	13	—	—
	Functional ...	1	80	1	5
	Anæmia ..	14	25	2	5
Lungs	Bronchitis ...	—	—	—	—
	Other Non-Tuberculous Diseases ...	—	2	2	2

Table II.—(*continued*).

Defect or Disease.		Routine Inspections.		Special Inspections.	
		No. of Defects.		No. of Defects.	
		Requiring treatment.	Requiring to be kept under observation, but not requiring treatment.	Requiring treatment.	Requiring to be kept under observation, but not requiring treatment.
Tuberculosis	Pulmonary :				
	Definite	—	2	—	1
	Suspected	—	—	4	1
	Non-Pulmonary :				
	Glands	—	2	3	—
	Spine	—	—	—	—
	Hip	—	—	—	—
	Other Bones and Joints ...	—	—	—	—
	Skin	—	—	—	—
	Other Forms	—	—	—	—
Nervous System	Epilepsy	—	—	1	—
	Chorea	2	1	4	—
	Other Conditions	12	8	9	3
Deformities	Rickets	—	—	—	—
	Spinal Curvature	2	2	3	1
	Other Forms	7	3	5	—
Other Defects or Diseases		15	16	309	17

B. Number of Individual Children found at Routine Medical Inspection to require Treatment (excluding Uncleanliness and Dental Diseases).

Group.	Number of Children		Percentage of Children found to require Treatment
	Inspected	Found to require Treatment	
Code Groups :			
Entrants	741	31	4·1
Intermediates	698	43	6·1
Leavers	787	68	8·6
Total (Code Groups)	2226	142	6·3
Other Routine Inspections...	—	—	—

TABLE III. Return of all Exceptional Children in the Area.

			Boys	Girls	Total
Blind (including partially blind).	(i.) Suitable for training in a School or Class for the totally blind.	Attending Certified Schools or Classes for the Blind ...	2	2	4
		Attending Public Elementary Schools	—	—	—
		At other Institutions	—	—	—
		At no School or Institution ...	—	—	—
	(ii.) Suitable for training in a School or Class for the partially blind.	Attending Certified Schools or Classes for the Blind ...	—	—	—
		Attending Public Elementary Schools	—	—	—
		At other Institutions	—	—	—
		At no School or Institution ...	—	—	—
Deaf (including deaf and dumb & partially deaf).	(i) Suitable for training in a School or Class for the totally deaf or deaf and dumb.	Attending Certified Schools or Classes for the Deaf ...	5	4	9
		Attending Public Elementary Schools	—	—	—
		At other Institutions	—	—	—
		At no School or Institution ..	—	—	—
	(ii.) Suitable for training in a School or Class for the partially deaf.	Attending Certified Schools or Classes for the Deaf ...	—	—	—
		Attending Public Elementary Schools	1	—	1
		At other Institutions	—	—	—
		At no School or Institution ..	—	—	—
Mentally Defective.	Feebleminded (cases not notifiable to the Local Control Authority.)	Attending Certified Schools for Mentally Defective Children	6	4	10
		Attending Public Elementary Schools	29	17	46
		At other Institutions	—	—	—
		At no School or Institution ..	—	—	—
	Notified to the Local Control Authority *during the year*.	Feebleminded	—	—	—
		Imbeciles...	—	1	1
		Idiots	—	—	—
Epileptics.	Suffering from severe epilepsy.	Attending Certified Special Schools for Epileptics ...	—	—	—
		In Institutions other than Certified Special Schools ...	—	—	—
		Attending Public Elementary Schools...	—	—	—
		At no School or Institution ..	1	1	2

TABLE III.—(*continued*).

			Boys	Girls	Total
Epileptics (*continued*)	Suffering from epilepsy which is not severe.	Attending Public Elementary Schools...	4	—	4
		At no School or Institution ...	—	—	—
	Infectious pulmony and glandular tuberculosis.	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board	2	3	5
		At other Institutions	—	—	—
		At no School or Institution ...	2	1	3
	Non-infectious but active pulmonary and glandular tuberculosis.	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board	1	2	3
		At Certified Residential Open Air Schools	—	—	—
		At Certified Day Open Air Schools	18	12	30
		At Public Elementary Schools	15	7	22
		At other Institutions	—	1	1
		At no School or Institution ...	5	11	16
Physically Defective.	Delicate children (*e.g.*, pre-or latent tuberculosis, malnutrition, debility, anaemia, etc.).	At Certified Residential Open Air Schools	—	—	—
		At Certified Day Open Air Schools...	6	3	9
		At Public Elementary Schools	179	203	382
		At other Institutions	—	—	—
		At no School or Institution ...	—	2	2
	Active non-pulmonary tuberculosis.	At Sanatoria or Hospital Schools approved by the Ministry of Health or the Board	—	1	1
		At Public Elementary Schools	1	—	1
		At other Institutions	—	—	—
		At no School or Institution ..	1	—	1
	Crippled Children (other than those with active tuberculous disease), *e.g.*, children suffering from paralysis, etc., and including those with severe heart disease.	At Certified Hospital Schools	—	—	—
		At Certified Residential Cripple Schools	—	—	—
		At Certified Day Cripple Schools	—	—	—
		At Public Elementary Schools	11	18	29
		At other Institutions	—	—	—
		At no School or Institution ...	—	—	—

TABLE IV. Return of Defects Treated during the year ended 31st December, 1924.

TREATMENT TABLE.

Group I. Minor Ailments (excluding Uncleanliness, for which see Group V.)

Disease or Defect.	No. of Defects treated or under treatment during the year.		
	Under the Authority's Scheme.	Otherwise	Total.
Skin			
Ringworm—Scalp	12	4	16
,, Body	4	6	10
Scabies	—	—	—
Impetigo...	30	2	32
Other Skin Diseases	122	12	134
Minor Eye Defects	89	11	100
(External and other, but excluding cases falling in Group II.)			
Minor Ear Defects	—	4	4
Miscellaneous	301	6	307
(*e.g.*, minor injuries, bruises, sores, chilblains etc.)			
Total.	558	45	603

Group II. Defective Vision and Squint (excluding Minor Eye Defects treated as Minor Ailments—Group I.)

Defect or Disease.	No. of Defects dealt with.			
	Under the Authority's Scheme	Submitted to refraction by private practitioner or at hospital, apart from the Authority's Scheme.	Otherwise.	Total.
Errors of Refraction (including squint)	101	5	1	107
Other Defect or Disease of the Eyes (excluding those recorded in Group I.)	—	—	—	—
Total ...	101	5	1	107

Total number of children for whom spectacles were prescribed

(*a*)	Under the Authority's Scheme	92
(*b*)	Otherwise	6

Total number of children who obtained or received spectacles

(*a*)	Under the Authority's Scheme	77
(*b*)	Otherwise	6

Group III. Treatment of Defects of Nose and Throat.

Number of Defects.

Received Operative Treatment.				
Under the Authority's Scheme, in Clinic or Hospital.	By Private Practitioner or Hospital, apart from the Authority's Scheme.	Total.	Received other forms of Treatment.	Total number treated.
27	—	27	—	27

Group IV. Dental Defects.

(1) Number of Children who were:—

(*a*) Inspected by the Dentist:

	Aged:		
Routine Age Groups	5	633	Total 4701
	6	297	
	7	357	
	8	483	
	9	516	
	10	566	
	11	503	
	12	568	
	13	439	
	14	339	
Specials			681
Grand Total ...			5382

In addition, 927 children were inspected whose age distribution was not recorded, making a total of 6309 children inspected.

(*b*)	Found to require treatment	2985
(*c*)	Actually treated	2977
(*d*)	Re-Treated during the year as the result of periodical examination	1384

(2) Half-days devoted to:—

Inspection ...	54	Total 712
Treatment ...	658	

(3) Attendances made by Children for treatment 6593

(4) Fillings:—

Permanent Teeth	2352	Total 3465
Temporary Teeth	1113	

(5) Extractions:—

Permanent Teeth	390	Total 4682
Temporary Teeth	4292	

(6) Administrations of general anæsthetics for extractions 71

(7) Other operations:—

Permanent Teeth	253	Total 967
Temporary Teeth	714	

Group V. Uncleanliness and Verminous Conditions.

(i)	Average number of visits per school made during the year by the School Nurses	15.3
(ii)	Total number of Examinations of children in the Schools by School Nurses	15,807
(iii)	Number of individual children found unclean ...	1,107
(iv)	Number of children cleansed under arrangements made by the Local Education Authority	Nil.
(v)	Number of cases in which legal proceedings were taken :	
	(*a*) Under the Education Act, 1921	5
	(*b*) Under School Attendance Byelaws	20

REPORT

ON

DENTAL INSPECTION

AND

TREATMENT OF SCHOOL CHILDREN

For the Year 1924.

BY

W. BAIRD GRANDISON, L.D.S., R.C.S., Edin

PUBLIC DENTAL OFFICER.

THE DENTAL INSTITUTE,
35, PARK SIDE,
CAMBRIDGE.

December 31st, 1924.

To the Chairman and Members of the Education Committee.

LADIES AND GENTLEMEN,

I have the honour to submit the Seventeenth Report of the working of the Dental Institute, covering a period from January 1st, 1924, to December 31st, 1924, inclusive.

Once again it has been possible to visit every school in the Borough during the year 1924 and to treat every child, accepting treatment, who, on Inspection was found to have Dental Defects.

A feature of the report is that indicated under Table VIII, namely, "From the mouths of 4701 children after treatment the amount of Dental Caries present is negligible."

I desire to acknowledge the valuable help of my Assistant and Dental Attendants in the compilation of the Statistics necessary for this report

I am,

Ladies and Gentlemen,

Your obedient servant

W. BAIRD GRANDISON.

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Report on the Dental Inspection and Treatment of School Children.

For the Year 1924.

I.—Scope of the Scheme.

The Seventeenth Report on the working of the Dental Institute covers the year 1924, and relates to twelve months actual treatment. All children of all ages are embraced within the scheme, and the work includes active conservative treatment of the Temporary Dentition in addition to that of the Permanent Dentition, the object being to prevent, as far as possible, the onset of decay in the Permanent Dentition, particularly the first Permanent Molars, which are subjected to removal, as a direct result of neglect of the Temporary Molars.

Ia.—Inspections.

During the year 1924, 54 Inspection Sessions were held, 658 Treatment Sessions were held, and 32 Sessions devoted to work of an administrative and organising character.

The following Statistical Tables relate to the Teeth of children accepting Treatment only, there being no statistics available concerning the Teeth of children who have refused treatment offered, beyond the statement under "No. of children inspected who have received no treatment."

II.—Summary of Work Done.

A.—Table showing the number of children examined and the number of children treated during the year 1924:—

Month.	No. of Children Examined	Number of Children Treated for :—			No. of Children Refusing Further Treatment.
		Fillings only.	Fillings and Extractions	Extractions only.	
January ...	325	27	41	51	—
February...	369	38	68	57	8
March ...	446	57	43	49	—
April ...	363	63	66	45	—
May ...	474	121	111	48	—
June ...	421	67	84	71	—
July ...	452	78	100	132	—
August* ...	—	—	—	—	—
September	510	67	78	66	—
October ...	539	85	101	91	—
November	517	60	91	87	—
December	285	31	65	57	—
Total ...	4701	694	848	754	8

* Clinic closed for vacation.

The above figures include treatment of the temporary dentition.

In the year 1924 the number of children comprised in the routine examinations was 5,628. Of this number 2,404 had sound dentitions, 2,296 received treatment, and 8 children had treatment which was not completed.

B.—Table showing the number of Operations performed during the year 1924.

Month.	Fillings.			Extractions.		Teeth Treated with Nitrate of Silver.
	Amalgam.	Amalgam and Cement.	Amalgam with Root Canal treatment	Temporary Teeth.	Permanent Teeth.	
January ...	98	16	3	201	4	27
February ...	162	45	22	299	24	43
March	177	78	26	161	43	31
April	225	49	27	215	33	96
May	338	90	35	260	44	155
June	275	59	19	361	50	60
July	230	65	14	555	39	149
August* ...	—	—	—	—	—	—
September ...	234	52	19	328	43	54
October ...	331	44	18	485	39	158
November ...	309	21	13	482	8	128
December ..	160	14	5	372	9	58
Total ...	2539	533	201	3719	336	954

* Closed during August for vacation.

The above figures include treatment of the temporary dentition.

One session each week was devoted to work on casual cases chiefly to relieve pain, and, as the Statistics resulting therefrom are not included in Table B, particulars relating to work on casual cases is recorded herewith.

Bb.—Table showing the number of children attending as Casual Cases and the Operations connected therewith.

Number of Casual Cases	Number of Extractions		Number of Fillings		Number of Teeth treated with Nitrate of Silver
	Temporary Teeth	Permanent Teeth	Temporary Teeth	Permanent Teeth	
681	573	54	41	55	119

The total number of temporary teeth extracted during the year 1924 was 3719, as compared with 3254 in the year 1923, and the total number of permanent teeth extracted during the year 1924 was 336, as compared with 214 in the year 1923. The increase in the number of permanent teeth extracted is partially explained by the fact that we were successful in obtaining the consent of a few parents, who had refused treatment previously for their children, to the removal of unsaveable permanent teeth in their children, and also owing to the fact that a number of permanent teeth were removed for orthodontic purposes (see under other operations). It will be seen that removal of teeth is still necessary even after seventeen years of working this scheme, and will continue to be necessary until the time approaches when all parents will appreciate the enormous value of early inspection and early treatment, combined especially with an organised system of Oral Cleanliness.

Prevention of the onset of Dental Caries is better than the cure of Dental Disease.

III.—SUMMARY OF ALL EXAMINATIONS.

C.—Table showing the results of an examination of the Teeth of Elementary School Children.

Age.	Number of Children Examined.	Number of Temporary Teeth			Number of Permanent Teeth		
		Sound.	Decayed Saveable	Decayed Unsaveable.	Sound.	Decayed Saveable	Decayed Unsaveable.
5 Years	633	10636	957	699	204	7	—
6 "	297	4170	337	497	1086	51	—
7 "	357	4068	246	599	2516	195	8
8 "	483	4107	137	659	4995	315	10
9 "	516	3072	82	543	6429	296	28
10 "	566	2230	22	377	8940	259	37
11 "	503	1085	2	225	10031	323	65
12 "	568	513	3	93	13330	309	98
13 "	439	159	—	43	11098	295	40
14 "	339	53	—	8	7646	227	50
Total	4701	30093	1786	3743	66275	2277	336

D.—Table calculated from Table C giving the average results for 100 Children of Each Year of Age.

Age.	Number of Children Examined.	Number of Temporary Teeth			Number of Permanent Teeth		
		Sound.	Decayed Saveable	Decayed Un-saveable	Sound.	Decayed Saveable	Decayed Un-saveable
5 Years	100	1680	151	110	30	1	—
6 ,,	100	1404	113	167	365	17	—
7 ,,	100	1139	68	168	704	54	2
8 ,,	100	850	28	136	1034	65	2
9 ,,	100	595	15	105	1245	57	5
10 ,,	100	393	3	66	1597	45	6
11 ,,	100	215	—	44	1994	64	10
12 ,,	100	90	—	16	2345	54	17
13 ,,	100	36	—	9	2528	65	9
14 ,,	100	15	—	2	2252	67	14

The actual number of children examined during the year 1924, excluding Casual Cases, was 4701. In addition 681 children were examined and treated for the relief of pain.

The temporary and permanent teeth are arranged in three divisions, those which were sound, those which were decayed but were saveable, those which were decayed and unsaveable, and therefore required extraction.

Table C, shows the results of the examination of the teeth of the children, while Table D shows the figures in the preceding Table expressed in the ratio of 100 children of each age, to enable comparison with the figures given with the reports for previous years.

The total number of teeth examined in the routine cases was 104,510. Of 35,622 temporary teeth 84·4 per cent were sound. This is a similar percentage to the corresponding proportion for the year 1924, thus showing continued improvement in the condition of the temporary Dentition. The percentage of decayed saveable teeth has been reduced from 7·1 per cent in the year 1923 to 5·01 per cent in the year 1924. The percentage of decayed unsaveable temporary teeth is increased by 2·1 per cent, the percentages being 8·4 per cent in the year 1923 and 10·5 per cent in the year 1924. This increase is due to the fact that more children aged 5 years have been inspected and treated in the year 1924. There is a similar improvement in the condition of the Permanent Dentition.

*I.—Table showing the distribution of Unsaveable Permanent Teeth.

Year.	Number of Children grouped with the Number of unsaveable Permanent Teeth in each Mouth.							Total Number of Children with Unsaveable Permanent Teeth.	Total Number of Unsaveable Permanent Teeth.
	I.	II.	III.	IV.	V.	VI.	VII. or more.		
1924	143	57	10	11	1	—	—	222	336

* Tables indicated alphabetically may be compared with similar Tables in previous reports. Tables indicated numerically are usually peculiar to this Report.

E.—Table showing the number of children examined **before treatment,** and the number and percentage having no decay present, as also the number and age of children without permanent teeth emerged, and the number and age of children who had lost all their temporary teeth.

Age.	Number of Children Examined.	No Decay including Both Dentitions.		Number of Children without Permanent Teeth	Number of Children without Temporary Teeth
		Number of Children.	Percentage		
5 Years	633	260	41·0%	565	—
6 ,,	297	91	30·6	87	—
7 ,,	357	105	29·6	21	1
8 ,,	483	175	36·2	1	1
9 ,,	516	219	42·4	—	23
10 ,,	566	315	55·6	—	99
11 ,,	503	306	60·8	—	196
12 ,,	568	391	68·9	—	394
13 ,,	439	327	74·2	—	372
14 ,,	339	215	63·4	—	294
Total	4701	2404	51·1	674	1380

II.—Table showing the age and number of children inspected, and the number and percentage having no decay, one or two, three or four, five or six, seven or more decayed teeth present, both dentitions combined, before treatment in the year 1924.

Age.	No. of Children Examined.	Number and Percentage of Children who each had before treatment.									
		None Decayed.	%	One or Two Decayed.	%	Three or Four Decayed.	%	Five or Six Decayed.	%	Seven or More Decayed.	%
5 Years	633	260	41%	94	15%	117	18%	94	15%	68	10%
6 „	297	91	30	56	18	73	24	43	14	34	15
7 „	357	105	29	67	19	88	24	60	17	37	10
8 „	483	175	36	111	23	101	20	63	13	33	7
9 „	516	219	42	123	24	98	19	55	10	21	4
10 „	566	315	55	108	20	88	15	30	5	25	4
11 „	503	306	60	95	19	63	12	25	5	14	3
12 „	568	391	68	100	18	44	8	25	4	8	1
13 „	439	327	74	61	14	28	7	8	1	15	3
14 „	339	215	63	64	19	31	9	20	6	9	2
Total ...	4701	2404	51·1	879	18·7	731	15·5	423	8·9	264	5·6

Table E shows that on examination and before treatment 2404 children were found to have sound dentitions, either naturally or artificially.

Table II. shows how the decayed teeth found were distributed, and it will be noticed that 34·2 per cent. of the children have four or less teeth decayed. If to this percentage we add the 51·1 per cent. of children with sound dentitions, we find that 14·7 per cent. of all the children examined have more than four decayed teeth each as compared with 13·5 per cent. in the year 1923, an increase of 1·2 per cent. All these figures apply to both dentitions, and refer to the condition prior to treatment. The temporary dentition was responsible for the majority of the 14·7 per cent. of the children who had more than four teeth decayed.

F.—Table showing the number and age of children with permanent teeth, and the number and percentage having sound permanent teeth, artificially sound permanent teeth **after treatment,** during the year 1924, and one or more unsaveable permanent teeth.

Age.	Number with Permanent Teeth.	Number of Children whose Permanent Teeth were					
		Sound.		Made Artificially Sound.		Unsaveable.	
			%		%		%
5 Years	68	63	92·6	5	7·3	—	—
6 "	210	184	87·6	26	12·4	—	—
7 "	336	247	73·6	89	26·4	—	—
8 "	482	345	71·8	136	28·2	—	—
9 "	516	365	71·2	149	28·8	—	—
10 "	566	431	76·9	134	23·1	—	—
11 "	503	354	70·3	147	29·7	—	—
12 "	568	418	73·6	150	26·4	—	—
13 "	439	338	76·9	101	23·0	—	—
14 "	339	234	69·0	105	30·9	—	—
Total	4027	2979	74·0	1042	25·8	—	—

Table F shows that of the children examined who had permanent teeth 74·0 per cent. had sound or artificially sound permanent teeth. A further 25·8 per cent. were made sound during the year. Thus, after treatment, 99·8 per cent. of the children examined with permanent teeth were left with that dentition free from caries, the remaining ·2 per cent. were children who had saveable permanent teeth but who refused further treatment. Comparison with the same results last year shows an increase of ·4 per cent., and represents 4027 children.

No. of Children Inspected who have received no Treatment.

During the year **920** children, in addition to those already accounted for, have been inspected, but no statistics relating to the teeth of those children have been recorded, owing to the fact that no treatment has been carried out, due to a variety of reasons, as follows :

1st. The children concerned have their own Private Dentist. (77).
2nd. The parents of the children concerned have asked for a postponement of treatment. (430).
3rd. The parents of the children concerned have definitely refused treatment for their children. (413).

75 per cent. of the number of children who have not received Dental Treatment during the year 1924 are refusals. Inspection and Re-Inspection proves that those whose parents ask for a postponement of treatment do not send their children for treatment at a later date; children, who have their own Private Dentist, do not visit his surgery unless perhaps for the removal of one tooth which is causing immediate trouble. Of the number of children referred for treatment, 413 or 12·5 per cent. definitely refused the treatment offered; in addition, 507 children or 15·7 per cent. received no treatment at the Clinic for reasons stated above. These percentages are too high for a Borough, the Council of which has been providing dental treatment for children from 1907.

One of the chief difficulties in connection with parental refusals of Dental treatment, met with in the course of my duties is the fact that children who have had no Routine Dental treatment for years remain, nevertheless, in comparatively good health and are physically on an equality with their fellows accepting treatment. Further, teachers inform me that they do not notice any appreciable drop in the mental capacity of such children as compared with others. I have made a special study of this question for some considerable time and although there are no factors, such as Statistics, available on which one could base any definite conclusions, I feel bound to state that failure to obtain reliable data is due wholly to the "Vitality of Youth," a period of increased activity which, when passed, finds the untreated gradually developing lethargic symptoms, followed, in due course, with one or other disorder. The direct result of septic absorption from bad teeth.

Unfortunately, the largest number of refusals are to be found in the 5—6 age group of children, the plea of extreme youth being offered as an excuse. The proper age for a Parent to bring a child to the Dental Clinic is when the child is approximately one year old, for the simple reason, that any scheme which does not aim at the prevention of Dental Caries, rather than the cure of the disease when established, is costly, and of less permanent value. By bringing the children to the Dental Clinic when the teeth are sound, it is not only the duty of the Dentist to maintain the teeth in a thoroughly sound condition, but it is comparatively simple also, and would reduce the extent of treatment necessary to an absolute minimum, thus eliminating, almost entirely, multiple extractions, a continuous source of annoyance to children and parents alike. I hope to considerably reduce the percentage of refusals by increasing the number of Public Lectures, Talks to Mothers, etc.

IV.—SUMMARY OF EXAMINATION OF NEW PATIENTS.

The number of new patients examined for the first time in the year 1924 was 629.

V.—Table showing the number, age and sex of the children examined for the first time in the year 1924, and the number of sound, decayed saveable and decayed unsaveable teeth of each dentition that they possessed.

BOYS.

Age.	Number of Boys.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable.	Decayed Unsaveable.	Sound.	Decayed Saveable.	Decayed Unsaveable.
5 Years	228	3883	326	269	42	2	—
6 "	35	508	30	107	85	2	—
7 "	19	205	15	50	143	12	—
8 "	9	77	4	23	59	4	—
9 "	3	31	—	3	46	—	2
10 "	9	30	2	15	148	11	—
11 "	9	27	—	5	155	8	—
12 "	6	1	—	4	139	16	3
13 "	9	4	—	3	224	9	—
14 "	2	—	—	—	49	5	—
Total ...	329	4766	377	479	1090	69	5

GIRLS

Age.	Number of Girls.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable.	Decayed Unsaveable.	Sound.	Decayed Saveable.	Decayed Unsaveable.
5 Years	216	3792	277	180	48	1	—
6 "	27	378	35	59	100	9	—
7 "	10	107	6	32	71	8	—
8 "	11	110	9	7	118	2	—
9 "	13	85	—	32	180	7	—
10 "	9	59	3	6	173	6	—
11 "	6	23	—	6	95	9	3
12 "	5	5	—	1	117	5	2
13 "	2	—	—	—	53	1	2
14 "	1	—	—	—	28	—	—
Total ...	300	4559	330	323	983	48	7

VI.—Table showing results of an examination of 599 children who required no treatment previously.

BOYS.

Age.	Number of Boys.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed Saveable	Decayed Un-saveable.
5 Years	58	938	105	37	15	—	—
6 ,,	38	622	53	43	81	4	—
7 ,,	29	375	24	42	189	9	1
8 ,,	34	371	5	37	349	21	—
9 ,,	29	284	7	30	352	7	—
10 ,,	21	110	—	24	353	2	8
11 ,,	17	58	—	7	330	14	2
12 ,,	27	79	—	2	614	—	1
13 ,,	27	23	—	—	696	10	2
14 ,,	20	14	—	—	518	8	2
Total	300	2874	194	222	3497	75	16

GIRLS.

Age.	Number of Girls.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed Saveable	Decayed Un-saveable.
5 Years	52	902	54	54	39	—	—
6 ,,	32	523	37	19	107	1	—
7 ,,	31	424	11	29	226	7	—
8 ,,	34	346	14	27	382	23	2
9 ,,	44	353	10	44	620	20	—
10 ,,	21	133	—	11	361	7	—
11 ,,	21	53	—	7	462	7	2
12 ,,	23	26	—	—	608	10	2
13 ,,	28	5	—	—	734	7	—
14 ,,	13	—	—	—	316	5	1
Total	299	2765	126	191	3855	87	7

Of the 4701 children inspected in the year 1924, there were 599 or 12·7 per cent whose teeth had required no treatment previously, 300 boys and 299 girls. This is an increase of ·6 per cent, as compared with similar patients in 1923.

VII.—Table showing the results of an examination of 3473 children who had been treated previously.

Age.	Number of Children.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed Saveable	Decayed Un-saveable.
5 Years	79	1121	195	159	60	4	—
6 ,,	165	2139	189	270	713	35	—
7 ,,	268	2957	184	446	1887	159	7
8 ,,	395	3203	104	565	4087	205	5
9 ,,	427	2319	65	434	5231	262	25
10 ,,	506	1898	17	321	7905	233	33
11 ,,	450	924	2	200	8989	285	58
12 ,,	507	402	3	86	11852	278	90
13 ,,	373	127	—	40	9391	268	36
14 ,,	303	39	—	7	6735	209	47
Total	3473	15129	759	2528	56850	1998	301

The preceding statistical record indicates clearly the great advantage of a complete scheme of Dental Treatment. Systematic inspection resulting in the detection of the most minute cavities and accurate diagnosis with the ultimate treatment of the defects found have produced in Cambridge a condition of perfection hitherto regarded as hardly possible. The condition of the teeth of Elementary School children in Cambridge after treatment is such that no Pemanent Tooth is unsaveable and, with the exception of the children who refused further treatment, 8 in number, all Permanent Teeth are sound either naturally or artificially. The difficulty of maintaining the teeth in a thoroughly sound condition without further extensive treatment is ever before us, as, due in a measure to lack of support, numerous factors exist which rather than stimulate progress tend to have a serious and detrimental effect and this leads me to a discussion on a

SUMMARY OF HYGIENE OF THE MOUTH.

Numerous theories have been promulgated from time to time with reference to the incidence of Decay on Tooth Structure and although one has fostered an interest in all branches of Dental research it is, unfortunately, true that few theories, if any, have produced facts upon which one can afford to be dogmatic. It is generally accepted, however, that incorrect dieting, is, by virtue of what follows (commonly called Lactic Acid fermentation) a direct aid to the contraction of Dental Caries.

It is safe to assume that the majority of foodstuffs prepared for daily consumption are harmful and directly responsible for the prevalence of Dental Disease. It is perhaps advisable here to differentiate between foodstuffs etc. which are detrimental to the teeth and those which have an opposite effect.

EXAMPLES OF FOODSTUFFS, ETC., WHICH ARE HARMFUL TO THE TEETH

SECTION I.

White bread, milk, tinned foods, starchy foods such as—potatoes, rice, tapioca, sago, biscuits, oatmeal porridge, most patent foods, sauces, syrups, jams, sweets of all kinds.

EXAMPLES OF FOODSTUFFS, ETC., WHICH ARE HELPFUL TO THE TEETH.

SECTION II.

Fresh fruits—apples, oranges, nuts; raw vegetables—lettuce, watercress, celery, radishes, onions; crusts of wholemeal flour bread, crisp toast, twice baked bread, meat, fish, bacon and farm produce, except milk.

Complete and immediate elimination from one's diet of foodstuffs, such as are tabulated under Section 1 of this report is beyond my expectations, and perhaps not wholly advisable. Indeed, it must be definitely assumed that, meanwhile at least, parents of elementary school children will not attempt to deprive their children of such articles of diet, as, for example, white bread, milk and milk food generally. It is sound policy to advocate the abolition from one's diet of foods definitely harmful, and the substitution for these of articles, not only of special cleansing value to the teeth, but which are, by virtue of being fresh and requiring more mastication, definite aids to the process of digestion and therefore health giving.

Nevertheless it is recognised that the difficulties connected with the correct feeding of the populace are very great, and to be of real and lasting value a Government measure would appear to be necessary, for example:—It is certain that white bread is harmful, yet it is eaten and will continue to be eaten so long as it is possible for bakers to produce it, for the simple reason that white bread forms the principal item in the diet of the poorer classes, and, furthermore, is preferred to any other form of bread. For this and many other reasons I will be bold enough to state that the question of dieting is of secondary importance, and special attention must be diverted to some other channel, the result of which is more capable of achievement and which is of primary importance and urgently necessary, namely, "Oral Cleanliness" or the use of the tooth brush.

A point to emphasise is "Though foodstuffs which are harmful to the teeth continue to be consumed promiscuously, the detrimental effect on External Tooth Structure can be overcome by the frequent and correct use of the Toothbrush!"

To accomplish this **the teeth must be thoroughly cleaned just prior to retiring for the night,** and, in addition, after every meal containing articles of diet such as are tabulated in Section I. of the report. In Cambridge a scheme was initiated, necessitating the support of the Teaching Profession, and passed by the Council as follows:—

(1) Teachers to be supplied with toothbrushes to be sold to the children at cost price.

(2) Teachers be allowed a margin of 5 per cent. on the average attendance for free distribution in the case of children being unable to purchase.

(3) If the need for free distribution exceeds 5 per cent. the cases shall be reported to the Hygiene Committee for decision.

(4) The teachers, by daily examination, shall ensure that the brushes are being properly and adequately used.

Unhappily the anticipated improvement in the condition of the teeth of elementary school children as a result of the initiation of the above scheme is not forthcoming, inspection proving that fully 65 per cent. of the children do not clean their teeth regularly. May I here take the opportunity of thanking the members of the teaching profession for their assistance at Dental Inspections and also for the interest displayed in the important subject of Dental Treatment and may I call for still further support, particularly with regard to the question of Oral Cleanliness, all that is required further to reduce to an absolute minimum the incidence of Dental Disease. I should also desire to enlist the support of organisations interested in Oral Hygiene, as, for instance, The Dental Board of the United Kingdom, particularly when there is ample evidence available to prove:

1st. That children who habitually use the toothbrush have teeth infinitely superior to those who do not clean their teeth, and

2nd. That our slogan is by no means a myth, namely:
Clean-spaced teeth do not decay.

Table VIII. indicates the condition of the teeth of 4,701 children after treatment in the year 1924 revised from the bottom of Table C.

Number of Children.	Temporary Teeth.			Permanent Teeth.		
	Sound.	Decayed Saveable.	Decayed Unsaveable	Sound.	Decayed Saveable.	Decayed Unsaveable
4701	31879	—	24	68534	18	—

The above table is most interesting, showing as it does the remarkable condition of the teeth of elementary school children in Cambridge after treatment. From 4701 children attending our schools only 42 teeth show evidence of dental disease, a condition not only most desirable, but which could be maintained to a very great extent if due regard were paid to the two essentials, "Oral Cleanliness" and "A Correct Diet." Considering, therefore, that such a standard is possible of attainment, I trust the parents of the children and the children themselves will do all in their power to retain their teeth in a healthy condition.

Table IXA. shows the number of temporary teeth examined and the percentage sound, the percentage decayed saveable, and the percentage decayed unsaveable, with similar results from previous years to permit of a comparison.

Year	Number of Temporary Teeth Inspected.	Temporary Teeth.		
		Percentage Sound.	Percentage Decayed Saveable.	Percentage Decayed Unsaveable.
1908	32341	48·1 %	13·7 %	38·2 %
1913*	44549	59·6	35·0	5·4
1914*	49218	61·8	32·3	5·9
1915*	52262	63·9	32·1	4·0
1916*	44637	63·6	32·7	3·6
1917*	44312	62·0	34·2	3·6
1918*	42705	64·5	32·0	3·4
1919*	53533	65·2	31·8	3·0
1920*	36228	67·0	30·0	2·9

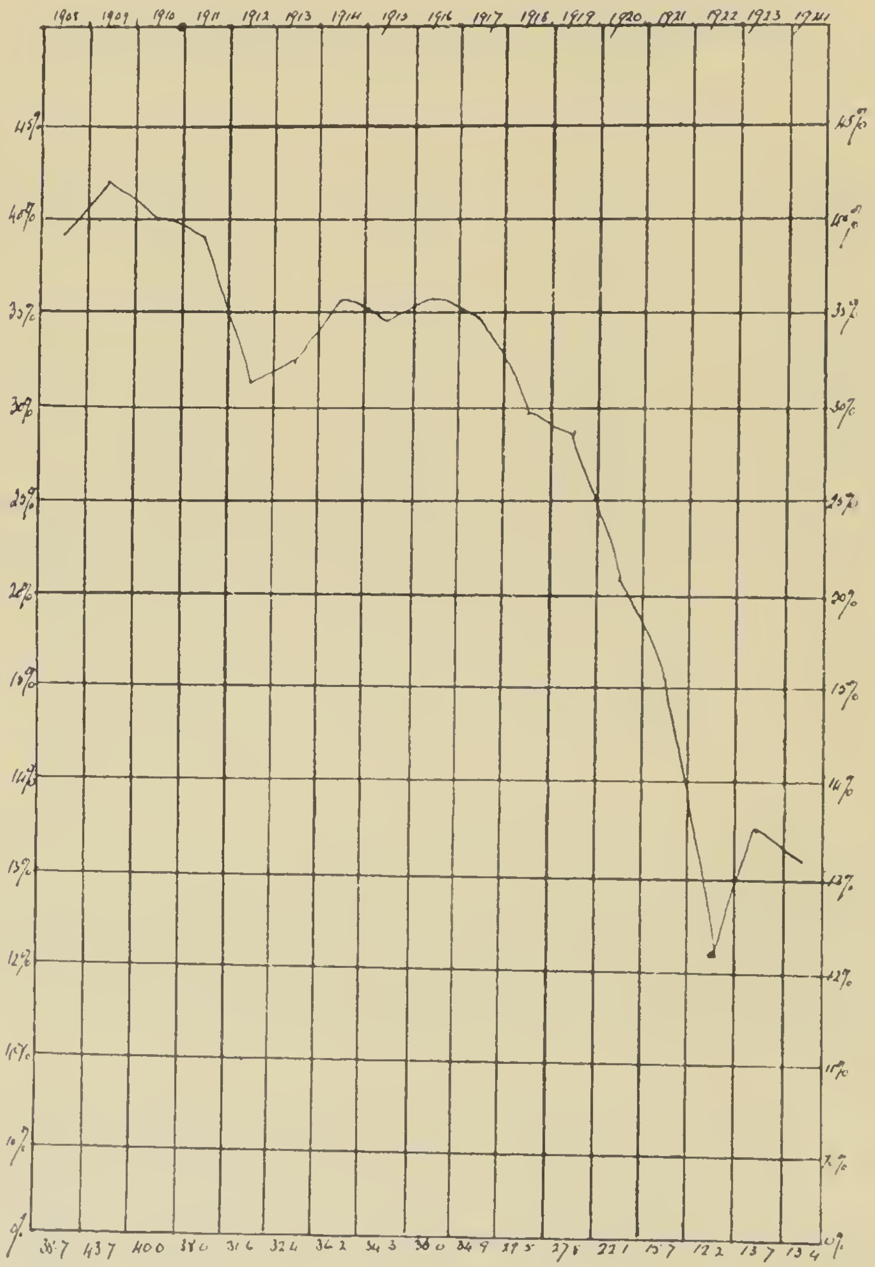
* After treatment during the year.

Table IXB. shows the number of temporary teeth examined in children accepting treatment, and the percentage sound, the percentage decayed saveable, and the percentage decayed unsaveable, with similar results from previous years to permit of a comparison.

Year.	Number of Temporary Teeth Inspected.	Temporary Teeth.		
		Percentage Sound.	Percentage Decayed Saveable	Percentage Decayed Unsaveable.
1921*	16668	95·6%	3·08%	1·2%
1922*	43806	98·4	1·4	·1
1923*	38198	99·8	·0	·07
1924*	35622	99·9	·0	·06

* After treatment during the year.

Diagram.—Showing the percentage of decay in the temporary teeth of the children aged 5 years, before treatment in each year of the scheme of School Dental Inspection from 1908 to 1924 (inclusive).



The above diagram indicates the percentage of decayed temporary teeth to the total number of temporary teeth present in the 5-year-old group of children, before treatment in each year that the scheme has been in existence.

The Graph shows a decrease from 13.7 in the year 1923 to 13.4 in the year 1924, in the amount of decay present in the five year old group of children before treatment. In order to reduce this percentage still further it is necessary to resort to propaganda to encourage parents to bring their infants to the Welfare Centres, and by so doing, automatically benefit from early dental inspection and advice relative to the development of the jaws, an essential factor in the general development of the child.

OTHER OPERATIONS.

During the year 1924 numerous operations have been performed of a minor character, such for example as scaling, gum treatment, and also crowns and treatment of irregularities of the teeth.

I consider it advisable to express my views, very briefly, on the subject of Orthodontia. It is a fact that irregularity of the teeth is a predisposing cause of Dental Caries, and as such deserves the attention of those responsible for the care of the teeth of elementary school children. The best method of dealing with this important branch of dentistry, where circumstance permit, is at the Maternity and Child Welfare Dental Clinics. In other words, " The prevention of the cause of irregularities of the teeth is what should be the aim of all dental officers whose business it is to deal with children. Breast feeding, abolition of the dummy, prevention of thumb and finger sucking, the chewing of a smooth bone, etc. will have the effect of producing in the child a dental arch sufficiently well developed to contain the necessary number of teeth in proper occlusion and well spaced. In addition School Dentists should be prepared to treat simple cases by such means for example, as judicious extraction, the use of simple apparatus and such like, but orthodontia on a large scale is the work of a specialist, furthermore the time occupied together with the expense involved in the manufacture of complex appliances, expense which, in the majority of cases, is irrecoverable from the parents, renders the inauguration of any such scheme unjustifiable, and to repeat myself ought not to be necessary if the proper attention is given to treatment of the child from infancy.

In Cambridge during the year 1924, 17 simple cases of irregularity have been rectified by means of apparatus and 64 permanent teeth have been extracted for orthodontic purposes.

The 64 permanent teeth are divided into two categories :—

1st. First permanent molars, saveable, but with pulps infected.

2nd. Second premolars badly placed in the dental arch.

Fabb & Tyler, Ltd., Cambridge.